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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,742	10/29/2003	Nobuyuki Suzuki	031254	5432
23850	7590	08/30/2005		
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006				
			EXAMINER SNIEZEK, ANDREW L	
			ART UNIT 2651	PAPER NUMBER

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/694,742

Applicant(s)

SUZUKI, NOBUYUKI

Examiner

Andrew L. Sniezek

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16-19, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Mazda (US006140784A ).

Re claim 16: Mazda teaches a head actuator control circuit comprising a power monitoring circuit (45) and an actuator control circuit (60) that to retract a head according to a power supply failure (abstract) that includes a first step of moving the head in an opposite direction of the retract such that the velocity of the head becomes constant (step 160) and a second step of moving the head to a retract position such that the velocity of the head in vicinity of the retract position is constant (step 170).

Re claim 17: The use of a voltage mode driver is satisfied by H-bridge driver (20).

Also, the controller is satisfied by element (35).

Re claim 18: The velocity detection unit is satisfied by element (35), see column 4, lines 32-39 and the controller is satisfied by operation of (35, 20) as discussed in column 4, lines 18-31.

Re claim 19: The brake circuit is satisfied by operation of (35,20) as discussed in column 4, lines 18-31.

Re claims 21-22: The use of an actuator is taught by actuator (12) and the claimed times are taught by (column 4, lines 1-17). The monitoring step is taught by operation of the window and compare unit (35) along with microprocessor (45).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mazda (US006140784A ) in view of McKenzie et al. (US006169382B1).

The teaching of Mazda is discussed above. Mazda also teaches to brake the actuator (column 4, lines 18-31) but does not brake the actuator by shorting the coil as set forth in claim 20. This type of braking is well known in the art (McKenzie et al.), column 2, lines 27-28. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute one type of braking method, shorting the coil as taught by McKenzie et al. for the current reversal technique as taught by Mazda, since each accomplishes the same result.

5. Claims 1, 3, 4, 6-8, 10, 11, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazda in view of Fayeulle et al.

The teaching of Mazda is discussed above and incorporated herein. Claim 1 has been amended to include a stopper in which the head contacts, which although not taught by Mazda, is well known in the art as taught by Fayeulle et al., (column 4, lines 18-22) to

limit the movement toward the inside diameter. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a stopper as taught by Fayeulle et al. into the arrangement of Mazda for the same purpose of limiting the inward movement of the actuator.

Re claim 3: the use of a velocity detection unit is satisfied by operation of window and compare unit (35) when used in conjunction with microprocessor (45) in Mazda.

Re claim 4: The step of braking is satisfied by (column 4, lines 18-31) of Mazda.

Re claim 6: The use of an actuator is taught by actuator (12) and the claimed times are taught by (column 4, lines 1-17) of Mazda.

Re claim 7: The monitoring step is taught by operation of the window and compare unit (35) along with microprocessor (45) of Mazda.

Re claims 8, 10, 11, 13, 14: Apparatus claims 8, 10, 11, 13, 14 are drawn to the apparatus corresponding to the method of using same as claimed in claims (1,6), 3, 4, 6, 7. Therefore apparatus claims 8, 10, 11, 13 and 14 correspond to method claims (1,6), 3, 4, 6 and 7, and are rejected for the same reasons of anticipation as used above.

Additionally Mazda teaches a predetermined position as landing area (19) and a retract position as ramp (15) satisfying the limitations of claim 15.

6. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazda (US006140784A) in view of Fayeulle et al. The teachings of Mazda and Fayeulle et al. are discussed above and incorporated herein. Mazda teaches the use of voltages as claimed (column 4) however does not specifically indicate that the voltages

are different. Column 4, lines 15-17 indicate that depending on the application, ID velocity and OD velocity may not be the same. One of ordinary skill in the art at the time of the invention, given this information would have concluded that one way of compensating for different velocities would be to make the voltage values different, since voltages are used to drive the actuator at desired velocities.

7. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazda (US006140784A ) in view of Fayeulle et al. as applied in claims 1, 3, 4, 6-8, 10, 11, 13-15 in view of McKenzie et al. (US006169382B1).

The teaching of Mazda and Fayeulle et al. are discussed above and incorporated herein. Additionally, Mazda teaches to brake the actuator (column 4, lines 18-31) but does not brake the actuator by shorting the coil. This type of braking is well known in the art (McKenzie et al.), column 2, lines 27-28. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute one type of braking method, shorting the coil as taught by McKenzie et al. for the current reversal technique as taught by Mazda, used in the arrangement of Mazda or Fayeulle et al. as applied, since each accomplishes the same result.

### ***Response to Arguments***

8. Applicant's arguments filed 6/15/05 have been fully considered but they are not persuasive.

Re claim 16: The argued feature of a stopper is not present in this claim.

Re claims 2 and 9: Although specific relations between velocities and voltages are not given, it is clear that the value of a voltage does determine a given velocity. Reading

the reference as a whole one of ordinary skill would deduce that a different voltage would achieve a different velocity.

Re claims 1, 8 and 15: The control of the motion of the actuator, i.e. to stop/limit the motion of the actuator is taught by Fayeulle et al. and would have the same affect when incorporated in Mazda as applied.

### ***Conclusion***

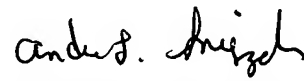
9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Snizek whose telephone number is 571-272-7563. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Andrew L. Sniezek  
Primary Examiner  
Art Unit 2651

A.L.S.  
8/25/05